

seems gorged with blood after the hæmorrhage has ceased, one or two scarifications should be made, to remove the sanguineous congestion; which we have already explained is very prejudicial to the success of the reparative process.

M. Phillips thus points out some of the anatomical conditions of the flap taken from the forehead in a rhino-plastic operation, on which its success very materially depends.

"It is indispensable that it should contain one artery at least. Hence the importance of prolonging the incisions to the angle of the eye, so that the pedicle of the flap contains the internal angular artery to supply it with blood. And then again, it is equally necessary that the blood, which is conveyed to it by the arteries, should be returned by veins, else the new nose will perish from congestive asphyxia. Indeed it is wonderful that this does not occur oftener than it really does, when we consider that not only are almost all the direct communicating branches between the arteries and the veins cut across, but that the blood in the divided arterics is prevented, in a great measure, from escaping, in consequence of the compression of the edges of the flap by the numerous sutures used to retain it in position."

"The destruction of the flap may arise from three different causes—from defective circulation, from excessive or superabundant circulation, and from supuration.

"If the pedicle be twisted too firmly, the vessels must necessarily be compressed, and the circulation through them be consequently more or less interrupted; the flap in consequence becomes pale, loses its heat, and speedily mortifies. But this does not occur so frequently as the mortification from accumulation or congestion of blood in consequence of its obstructed return through the veins. Under such circumstances, the mortification usually takes place in that part of the flap which is furthest distant from the pedicle.

"After the asphyxia now described, supuration is the most formidable evil to be dreaded in the management of rhino-plastic operations. The destruction commences at the edges, which swell, puff out, and separate from each other. This calamity is more apt to occur when the twisted suture has been used."\*—*Med. Chirurg. Rev.* July, 1840, from *Bulletin Méd. Belge*.

49. *Therapeutic Considerations on Obliterations of the Veins in the Treatment of Varix and Varicose Ulcers.*—M. JOBERT relates in the *Bulletin Gén. de Thérap.* for May, 1840, six cases, and he says that he could describe twelve others, in all of which the treatment of varicose veins by producing the obliterations of their trunks by needles and twisted sutures, or other means, though at first it seemed promising, had ultimately proved completely unsuccessful. In all the patients who were thus treated the varicose ulcers returned a short time after they left the hospital, as it was believed perfectly cured; and the return took place in these cases more rapidly than in all probability it would if only the ordinary treatment by rest, poultices, and bandages had been pursued.—*Brit. and For. Med. Rev.* Oct. 1840.

50. M. GUERIN on *Subcutaneous Wounds*.—Every one has heard of the proposal, or rather now the practice, of M. Guerin of Paris, in the treatment of lateral curvatures of the spine—the subcutaneous division of several of the muscles of the back.

From what he recently stated to the Royal Academy, he has met with extraordinary success. "I have, in nearly fifty cases, divided more or less completely most of the muscles of the back and spine—viz: the trapezius, the

\* If the destruction from this cause be considerable, it may be necessary to perform a second operation, and re transplant a fresh portion of healthy integument. But if it be only at one angle, we may succeed by the repeated application of the tincture of cantharides, in exciting the granulating process sufficiently to fill up the ulcerated space.

rhomboideus, angularis scapulæ, sacro-lumbaris, and longissimus dorsi. In each of these operations the wound of the muscle has been from three to four inches in length, and sometimes from one and a half to two and a half inches in depth, when the sacro-lumbaris and longissimus dorsi muscles were completely divided: in those cases where the trapezius and rhomboideus were entirely cut across, the bistoury traversed at least from four to five inches, or more, under the skin.

"In almost every one of these cases, no local inflammation nor constitutional feverishness supervened, and by the third day many of the patients were able to rise up and walk about without support. This most pleasing exemption from the accidents which so often follow upon ordinary wounds, is entirely attributable to the circumstance of the air not coming in contact with the freshly-divided surfaces: the tendency to inflammation seems scarcely to exist, and the parts commence and complete the reparative process without interruption or pain."

In addition to a multitude of experiments performed on dogs, M. Guérin has established the perfect innocuousness of subcutaneous wounds in operating for the relief of various forms of distortion. He has divided the sterno and the cleido-mastoid muscles (separately, simultaneously or consecutively) for wry-neck twenty-five times: in every one of these cases—the section having been made under the skin—the wound healed without the smallest trouble. Occasionally the operation was effected with considerable subcutaneous effusion of blood; but this was usually absorbed in twenty-four hours or so, and the reparative process then rapidly took place. Again, the operation of dividing the tendo-Achillis for club-foot he has performed upwards of 200 times; and in all these also he has been equally successful. In the practice of other surgeons, indeed, inflammation and suppuration has followed this simple operation, but these troublesome consequences are, we suspect, always owing to the outer wound having been made too large, and the air having thereby been permitted to enter.

"That such is the case is surely sufficiently proved by the success which has attended my operations. I have now performed the subcutaneous section of different tendons and muscles in upwards of 500 cases; and in not one instance has any troublesome inflammation of the wound supervened."

The great object, therefore, of the surgeon should be to prevent the entrance of the external air into the wound.

"From all these circumstances," continues M. Guérin, "I infer that subcutaneous wounds so quickly heal in consequence of the exclusion of the external air; and that it is from this fluid (the air) neither physically obstructing the circulation, nor chemically modifying the properties of the blood, nor altering in any degree its vital constitution, as well as from its not exerting any hurtful influence on the nerves and other parts which are protected from it, that the lacerated or divided tissues coalesce and unite by the first intention without any of the usual inflammatory symptoms."

That there is much truth in this observation is apparent from the surprising rapidity with which extensive effusions of blood are absorbed, and laceration of the soft tissues after some dislocations and bruises are healed, when there is no outward wound communicating with the seat of the injury. The great source of danger in compound fractures and dislocations is doubtless in the exposure of the lacerated parts to the action of the atmosphere. The dangerous effects of the admission of the air into the sacs of large abscesses is also well known to every surgeon.

*Postscript.*—The principle of subcutaneous division may be advantageously applied to other operations, besides that of the section of contracted muscles and tendons in cases of deformity.

In a recent number of the *Gazette Médicale*, we observed that M. Barthelemy, surgeon of the Hospital *Gros Caillou* at Paris, has strongly recommended this method of dividing sinovial tumours. He slides a longish narrow-bladed scalpel under the integuments, and cuts the tumour fairly across in the middle, so that all its contents must be extravasated into the surrounding cellular tissue: the

knife is then withdrawn by the small puncture, and firm compression is made on the part for a few days.

M. Barthelemy mentions three cases in which this mode of treatment has been quite successfully adopted. He suggests also, that perhaps other kinds of tumour may be advantageously treated in the same manner.

M. Malgaigne also has adopted in one case, where there were several ganglions or sinovial swellings over different joints, the method of dividing the tumours fairly across from side to side under the integuments. He suggests its applicability to the treatment of some cases of hydrocele.—*Med. Chirurg. Rev.*, July, 1840, from *Gaz. Méd. de Paris*.

51. *On Subcutaneous Wounds of the Joints*.—M. JULES GUERIN has communicated to the Academy of Medicine, a memoir on this subject, in which he endeavours to show from experiments on man and the lower animals, that subcutaneous wounds of the joints, (*i. e.* those not involving the skin,) as of the tendons, museles, aponeuroses, cellular tissue, nerves, and minute vessels, may all, by means of particular precautions, be healed by the first intention.

His first experiments were made on animals. He opened successively on two dogs, by the subcutaneous method, the humero-cubital, radio-carpal, femoro-tibial, and tibio-tarsal articulations; and when no air was allowed to come in contact with the opened joint, they healed immediately without exhibiting any traces of inflammatory action. When these articulations were, however, left free in their motions, synovial tumours formed around the joint; but if they were kept in a state of repose, and permanent extension, the cure was completed without any accident whatever. When the wounds were made so as to allow of the contact of air, or its introduction into the joint, inflammation and suppuration were excited, proportioned in extent and intensity to the duration of the contact of the air.

His next experiments were on man. Acting on the results furnished by these experiments, and also on what is every day observed in man, where, in luxation of the shoulder or hip-joints, though considerable injury is inflicted on the capsular ligament and neighbouring parts, no inflammatory symptoms are set up, provided the skin be not torn, he ventured to operate on man. He has many times made a subcutaneous section of the ligaments, and a portion of the fibrous capsule of the knee, and of the foot, to remedy deformities of these joints; and in no instance have these operations been followed by inflammatory action.

The precautions which must be taken in order to insure the subcutaneous wounds of the joints from inflammatory accidents, are, to make the aperture in the skin very small, and as far as possible from the articulation; to make it while the limb is extended, and not when it is bent; and to keep the limb after the operation in the most perfect state of repose. These two last directions are the consequences of a theory which M. Guerin has endeavoured to establish, which is, that articulations are, during their movements, the seat of a partial temporary enlargement, which causes in them a tendency to produce a void; so that if the limb was flexed or extended after the operation, a suction takes place at the orifice of the wound, and air is drawn into the joint.

In the third part of his paper, M. Guerin shows the practical uses of his discovery in the art of surgery. Serous, sanguineous, and purulent collections of matter in the articulations may, by the same means, be drawn off with safety. But it is chiefly to its advantages in aiding the reduction of old luxations, or removing deformities by incising the ligaments or tendons, that M. Guerin directs the attention. He has already by this means cured a congenital luxation of the clavicle which had resisted all known means. He made numerous incisions of the ligamentary apparatus around the head of the bone, and after two operations, so conducted, succeeded in bringing it into its proper place, and curing completely the deformity.—*Edinburg Med. and Surg. Journ.*, October 1840, from *Séances de l'Acad. des Sci.*, May, 1840.

52. M. GUERIN on *Club-Foot, Wry-neck, &c. &c.*—In a lecture which this gen-